(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau





PCT

(10) International Publication Number WO 2004/017011 A2

(51) International Patent Classification7:

F41C

(21) International Application Number:

PCT/US2003/025188

(22) International Filing Date: 13 August 2003 (13.08.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/403,655

16 August 2002 (16.08.2002) US

(71) Applicant (for all designated States except US): BIS-MUTH CARTRIDGE COMPANY [US/US]; 7155 Valjean Avenue, Van Nuys, CA 91406-3917 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): PETERSEN, Robert, E., [US/US]; 6420 Wilshire Boulevard, Los Angeles, CA 90048 (US).

(74) Agents: REPPER, George, R. et al.; Rothwell, Figg, Ernst & Manbeck, P.C., 1425 K Street, N.W., Suite 800, Washington, DC 20005 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

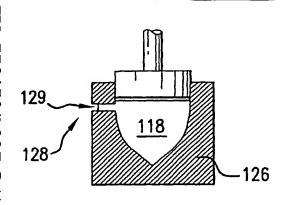
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD-OF MAKING A FRANGIBLE NON-TOXIC PROJECTILE



(57) Abstract: A method of making a frangible, non-toxic projectile is described in which substantially pure bismuth metal is melted, a quantity of the bismuth metal is poured into a mold, the bismuth metal is cooled to form a substantially bismuth metal core, the core is swaged in a profile die having a bleed hole of about 0.020 inch to about 0.038 inch in diameter, and the core is electroplated. The swaging may eliminate substantially a surface irregularity. The projectile may be releasably disposed in a cartridge along with a propellant and a primer, in which the primer ignites the propellant upon contact with a firing pin. The cartridge may itself be releasably disposed within a barrel of a firearm.